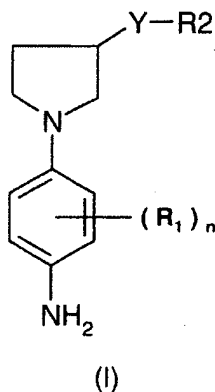


**WHAT IS CLAIMED IS:**

1. A compound chosen from para-phenylenediamine derivatives substituted with a pyrrolidyl group, wherein said pyrrolidyl-substituted para-phenylenediamine derivatives are chosen from derivatives corresponding to formula (I), and the addition salts thereof,



wherein:

- n is an integer from 0 to 4,  
provided that when n is greater than or equal to 2, then the radicals  $R_1$  may be identical or different,
- $R_1$  is chosen from halogen atoms; saturated and unsaturated, aliphatic and alicyclic  $C_1$ - $C_6$  hydrocarbon-based chains, wherein at least one carbon atom of the hydrocarbon-based chain may be replaced with at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and from SO and  $SO_2$  groups,  
provided that the radical  $R_1$  does not comprise a peroxide bond or a diazo, nitro or nitroso radical;  
and further wherein the hydrocarbon-based chain may be substituted with at least one group chosen from halogen atoms and hydroxyl, amino, mono-( $C_1$ - $C_4$ )alkylamino, di( $C_1$ - $C_4$ )alkylamino and tri( $C_1$ - $C_4$ )alkylammonium radicals;
- Y is chosen from a covalent bond and a linear or branched  $C_1$ - $C_{14}$  alkylene chain,

wherein at least one carbon atom of the chain may be replaced with at least one atom chosen from oxygen, nitrogen, silicon and sulphur atoms or with a group chosen from SO and SO<sub>2</sub> groups; wherein the chain may be substituted with at least one radical chosen from hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, amino, C<sub>1</sub>-C<sub>6</sub> alkylamino and C<sub>1</sub>-C<sub>6</sub> dialkylamino radicals; and further wherein the chain may bear at least one ketone functional group, and

- R<sub>2</sub> is chosen from 3- to 7-membered saturated and unsaturated carbocycles and heterocycles, which may be substituted with at least one radical chosen from C<sub>1</sub>-C<sub>6</sub> alkyl and C<sub>1</sub>-C<sub>6</sub> hydroxyalkyl radicals.
2. The compound according to Claim 1, wherein n is equal to 0 or 1.
  3. The compound according to Claim 1, wherein R<sub>1</sub> is chosen from halogen atoms, C<sub>1</sub>-C<sub>4</sub> alkyl radicals, C<sub>1</sub>-C<sub>4</sub> hydroxyalkyl radicals, C<sub>1</sub>-C<sub>4</sub> aminoalkyl radicals, C<sub>1</sub>-C<sub>4</sub> alkoxy radicals and C<sub>1</sub>-C<sub>4</sub> hydroxyalkoxy radicals.
  4. The compound according to Claim 3, wherein R<sub>1</sub> is a radical chosen from methyl, hydroxymethyl, 2-hydroxyethyl, 1,2-dihydroxyethyl, methoxy, isopropoxy and 2-hydroxyethoxy radicals.
  5. The compound according to Claim 1, wherein Y is a covalent bond.
  6. The compound according to Claim 1, wherein Y is chosen from C<sub>1</sub>-C<sub>8</sub> alkylene chains, which may comprise at least one unit chosen from -O-, -NR'- and -NR'CO- wherein R' is chosen from hydrogen atoms and C<sub>1</sub>-C<sub>4</sub> alkyl radicals.
  7. The compound according to Claim 1, wherein Y is chosen from -O-, -NR'-, -S-, -SO- and -SO<sub>2</sub>-.
  8. The compound according to Claim 1, wherein R<sub>2</sub> is a nitrogenous heterocycle.
  9. The compound according to Claim 8, wherein R<sub>2</sub> is chosen from imidazole,

pyrrolidine, piperazine, piperidine, triazole, diazepam and pyrazole rings.

10. The compound according to Claim 8, wherein R<sub>2</sub> is linked to Y via one of the nitrogen atoms of the nitrogenous heterocycle.

11. The compound according to Claim 1, wherein R<sub>2</sub> is a carbocycle chosen from C<sub>4</sub>-C<sub>7</sub> cycloalkyls.

12. The compound according to Claim 1, wherein R<sub>2</sub> is a phenyl radical.

13. The compound according to Claim 1, chosen from 4-(3-imidazol-1-ylpyrrolid-1-yl)phenylamine,

4-(3-[1,2,4]triazol-1-ylpyrrolid-1-yl)phenylamine,

4-[1,3']bipyrrolid-1'-ylphenylamine,

4-[3-(4-methylpiperazin-1-yl)pyrrolid-1-yl]phenylamine,

4-[3-(4-methyl[1,4]diazepam-1-yl)pyrrolid-1-yl]phenylamine,

4-{3-[2-(4-methyl[1,4]diazepam-1-yl)ethoxy]pyrrolid-1-yl}phenylamine,

4-{3-[2-(4-methylpiperazin-1-yl)ethoxy]pyrrolid-1-yl}phenylamine,

4-[3-(2-pyrrolid-1-ylethoxy)pyrrolid-1-yl]phenylamine,

4-[3-(2-piperid-1-ylethoxy)pyrrolid-1-yl]phenylamine,

[1-(4-aminophenyl)pyrrolid-3-yl]-3-imidazol-1-ylpropylamine,

2-methyl-[1-(4-aminophenyl)pyrrolid-3-yl](3-imidazol-1-ylpropyl)amine,

4-(3-imidazol-1-ylpyrrolid-1-yl)-2-methylphenylamine,

2-methyl-4-(3-[1,2,4]triazol-1-ylpyrrolid-1-yl)phenylamine,

4-[1,3']bipyrrolid-1'-yl-2-methylphenylamine,

2-methyl-4-[3-(4-methylpiperazin-1-yl)pyrrolid-1-yl]phenylamine,

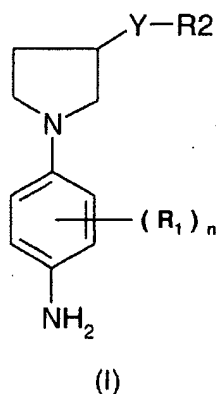
2-methyl-4-[3-(4-methyl[1,4]diazepam-1-yl)pyrrolid-1-yl]phenylamine,

2-methyl-4-{3-[2-(4-methyl[1,4]diazepam-1-yl)ethoxy]pyrrolid-1-yl}phenylamine,

2-methyl-4-{3-[2-(4-methylpiperazin-1-yl)ethoxy]pyrrolid-1-yl}phenylamine,  
4-(3-pyrazol-1-ylpyrrolid-1-yl)phenylamine,  
2-methyl-4-(3-pyrazol-1-ylpyrrolid-1-yl)phenylamine,  
2-methyl-4-[3-(2-pyrrolid-1-ylethoxy)pyrrolid-1-yl]phenylamine and  
2-methyl-4-[3-(2-piperid-1-ylethoxy)pyrrolid-1-yl]phenylamine.

14. The compound according to Claim 8, chosen from  
4-(3-imidazol-1-ylpyrrolid-1-yl)phenylamine,  
4-[1,3']bipyrrolid-1'-ylphenylamine,  
4-[3-(4-methylpiperazin-1-yl)pyrrolid-1-yl]phenylamine,  
4-{3-[2-(4-methylpiperazin-1-yl)ethoxy]pyrrolid-1-yl}phenylamine,  
4-[3-(2-pyrrolid-1-ylethoxy)pyrrolid-1-yl]phenylamine,  
4-[3-(piperid-1-yl)pyrrolid-1-yl]phenylamine,  
4-[3-(2-piperid-1-ylethoxy)pyrrolid-1-yl]phenylamine,  
[1-(4-aminophenyl)pyrrolid-3-yl](3-imidazol-1-ylpropyl)amine,  
2-methyl-[1-(4-aminophenyl)pyrrolid-3-yl](3-imidazol-1-ylpropyl)amine,  
4-(3-imidazol-1-ylpyrrolid-1-yl)-2-methylphenylamine,  
4-[1,3']bipyrrolid-1'-yl-2-methylphenylamine,  
2-methyl-4-[3-(4-methylpiperazin-1-yl)pyrrolid-1-yl]phenylamine,  
2-methyl-4-[3-(piperid-1-yl)pyrrolid-1-yl]phenylamine,  
2-methyl-4-{3-[2-(4-methylpiperazin-1-yl)ethoxy]pyrrolid-1-yl}phenylamine,  
4-(3-pyrazol-1-ylpyrrolid-1-yl)phenylamine,  
2-methyl-4-(3-pyrazol-1-ylpyrrolid-1-yl)phenylamine,  
2-methyl-4-[3-(2-pyrrolid-1-ylethoxy)pyrrolid-1-yl]phenylamine, and  
2-methyl-4-[3-(2-piperid-1-ylethoxy)pyrrolid-1-yl]phenylamine.

15. A dye composition comprising at least one oxidation base chosen from pyrrolidyl- substituted para-phenylenediamine derivatives chosen from derivatives corresponding to formula (I), and the addition salts thereof



wherein

- $n$  is an integer from 0 to 4, provided that when  $n$  is greater than or equal to 2, then the radicals  $R_1$  may be identical or different,
- $R_1$  is chosen from halogen atoms; saturated and unsaturated, aliphatic and alicyclic  $C_1$ - $C_6$  hydrocarbon-based chains, wherein at least one carbon atom of the hydrocarbon-based chain may be replaced with at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and SO and  $SO_2$  groups, provided that the radical  $R_1$  does not comprise a peroxide bond or a diazo, nitro or nitroso radical; and further wherein the hydrocarbon-based chain may be substituted with at least one group chosen from halogen atoms and hydroxyl, amino, mono- $(C_1-C_4)$ alkylamino, di $(C_1-C_4)$ alkylamino and tri $(C_1-C_4)$ alkylammonium radicals;
- $Y$  is chosen from a covalent bond and a linear or branched  $C_1$ - $C_{14}$  alkylene chain, wherein at least one carbon atom of the chain may be replaced with at least one atom chosen from oxygen, nitrogen, silicon and sulphur atoms or with a group chosen from SO and  $SO_2$  groups; wherein the chain may be substituted with at least one radical

chosen from hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, amino, C<sub>1</sub>-C<sub>6</sub> alkylamino and C<sub>1</sub>-C<sub>6</sub> dialkylamino radicals; and further wherein the chain may bear at least one ketone functional group, and

- R<sub>2</sub> is chosen from 3- to 7-membered saturated and unsaturated carbocycles and heterocycles, which may be substituted with at least one radical chosen from C<sub>1</sub>-C<sub>6</sub> alkyl and C<sub>1</sub>-C<sub>6</sub> hydroxyalkyl radicals.

16. The dye composition according to Claim 15, further comprising at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols, naphthalene-based couplers, heterocyclic couplers, and the addition salts thereof.

17. The dye composition according to Claim 15, comprising at least one additional oxidation base chosen from para-phenylenediamines, bis(phenyl)-alkylenediamines, para-aminophenols, ortho-aminophenols and heterocyclic bases, and the addition salts thereof,

provided that the at least one additional oxidation base does not comprise at least one compound chosen from pyrrolidyl-substituted para-phenylenediamine derivatives chosen from derivatives corresponding to formula (I), and the addition salts thereof.

18. The dye composition according to Claim 17, wherein each of the oxidation bases is present in an amount ranging approximately from 0.001% to 10% by weight, relative to the total weight of the composition.

19. The dye composition according to Claim 16, wherein the at least one coupler is present in an amount ranging approximately from 0.001% to 10% by weight, relative to the total weight of the dye composition.

20. The dye composition according to Claim 17, further comprising at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols,

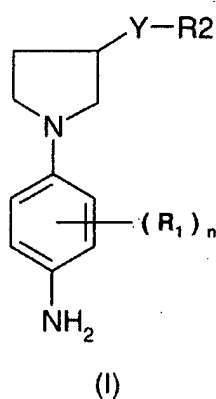
naphthalene-based couplers and heterocyclic couplers, and the addition salts thereof.

21. The dye composition according to Claim 20, wherein said at least one coupler is present in an amount ranging approximately from 0.01% to 10% by weight, relative to the total weight of the composition.

22. The dye composition according to Claim 15, further comprising a cosmetically acceptable medium that is suitable for dyeing keratin fibers.

23. The dye composition according to Claim 15, further comprising at least one oxidizing agent.

24. A process for the oxidation dyeing of keratin fibers, comprising applying to said keratin fibers, in the presence of an oxidizing agent, for a time that is sufficient to develop a desired coloration, an oxidation dyeing composition comprising at least one oxidation base, wherein said at least one oxidation base comprises at least one compound chosen from pyrrolidyl-group-substituted para-phenylenediamine derivatives chosen from derivatives corresponding to formula (I), and the addition salts thereof



wherein

- $n$  is an integer from 0 to 4, provided that when  $n$  is greater than or equal to 2, then the radicals  $R_1$  may be identical or different,
- $R_1$  is chosen from halogen atoms; saturated and unsaturated, aliphatic and alicyclic

C<sub>1</sub>-C<sub>6</sub> hydrocarbon-based chains, wherein at least one carbon atom of the hydrocarbon-based chain may be replaced with at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and SO and SO<sub>2</sub> groups, provided that the radical R<sub>1</sub> does not comprise a peroxide bond or a diazo, nitro or nitroso radical; and further wherein the hydrocarbon-based chain may be substituted with at least one group chosen from halogen atoms and hydroxyl, amino, mono-(C<sub>1</sub>-C<sub>4</sub>)alkylamino, di(C<sub>1</sub>-C<sub>4</sub>)alkylamino and tri(C<sub>1</sub>-C<sub>4</sub>)alkylammonium radicals;

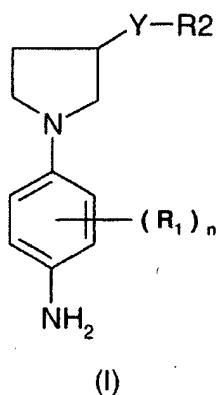
- Y is chosen from a covalent bond and a linear or branched C<sub>1</sub>-C<sub>14</sub> alkylene chain, wherein at least one carbon atom of the chain may be replaced with at least one atom chosen from oxygen, nitrogen, silicon and sulphur atoms or with a group chosen from SO and SO<sub>2</sub> groups; wherein the chain may be substituted with at least one radical chosen from hydroxyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, amino, C<sub>1</sub>-C<sub>6</sub> alkylamino and C<sub>1</sub>-C<sub>6</sub> dialkylamino radicals; and further wherein the chain may bear at least one ketone functional group, and
- R<sub>2</sub> is chosen from 3- to 7-membered saturated and unsaturated carbocycles and heterocycles, which may be substituted with at least one radical chosen from C<sub>1</sub>-C<sub>6</sub> alkyl and C<sub>1</sub>-C<sub>6</sub> hydroxyalkyl radicals.

25. The dyeing process according to Claim 24, wherein the at least one oxidizing agent is chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts, peracids and oxidase enzymes.

26. A multi-compartment device for the oxidation dyeing of keratin fibers, wherein a first compartment contains an oxidation dyeing composition and a second compartment contains at least one oxidizing agent, wherein said oxidation dyeing composition comprises at least one oxidation base chosen from pyrrolidyl- substituted para-phenylenediamine



derivatives chosen from derivatives corresponding to formula (I), and the addition salts thereof



wherein

- n is an integer from 0 to 4, provided that when n is greater than or equal to 2, then the radicals  $R_1$  may be identical or different,
- $R_1$  is chosen from halogen atoms; saturated and unsaturated, aliphatic and alicyclic  $C_1$ - $C_6$  hydrocarbon-based chains, wherein at least one carbon atom of the hydrocarbon-based chain may be replaced with at least one entity chosen from oxygen, nitrogen, silicon and sulphur atoms and SO and  $SO_2$  groups, provided that the radical  $R_1$  does not comprise a peroxide bond or a diazo, nitro or nitroso radical; and further wherein the hydrocarbon-based chain may be substituted with at least one group chosen from halogen atoms and hydroxyl, amino, mono- $(C_1-C_4)$ alkylamino, di $(C_1-C_4)$ alkylamino and tri $(C_1-C_4)$ alkylammonium radicals;
- Y is chosen from a covalent bond and a linear or branched  $C_1$ - $C_{14}$  alkylene chain, wherein at least one carbon atom of the chain may be replaced with at least one atom chosen from oxygen, nitrogen, silicon and sulphur atoms or with a group chosen from SO and  $SO_2$  groups; wherein the chain may be substituted with at least one radical chosen from hydroxyl,  $C_1$ - $C_6$  alkoxy, amino,  $C_1$ - $C_6$  alkylamino and  $C_1$ - $C_6$  dialkylamino

radicals; and further wherein the chain may bear at least one ketone functional group,  
and

- $R_2$  is chosen from 3- to 7-membered saturated and unsaturated carbocycles and heterocycles, which may be substituted with at least one radical chosen from  $C_1$ - $C_6$  alkyl and  $C_1$ - $C_6$  hydroxyalkyl radicals.